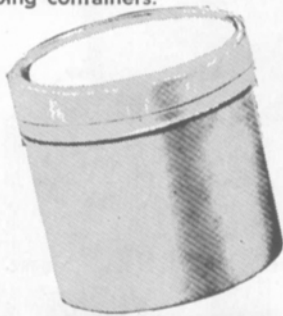


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The **Cumulative Index to Abstracts of Photographic and Engineering Literature**, covering Volumes I-VI (1962-1967) of the **Abstracts of Photographic Science and Engineering Literature (APSE)**, is available from Engineering Index, Inc., 345 E. 47 St., New York, NY 10017, at a price of \$25. The *Index* was edited and published by the Society of Photographic Scientists and Engineers and produced by Engineering Index.

APSE was established in 1962 and presently publishes some 3,600 abstracts per year. Computer-produced annual indexes have been issued each year. The *Cumulative Index* has been compiled to combine the work of the first six years of APSE into one reference volume, thus simplifying retrospective literature searching under a single set of thesaurus terms. The *Index* is arranged in five categories: Authors and Inventors, Patents by Countries, Patent Assignees or Owners, Subjects by Descriptors and Patents by Abstract Number. The book also includes detailed instructions for manual coordinate searching and supplies a list of abbreviations.

**Electronics Abstracts Journal** is published quarterly by Cambridge Communications Corp., 1612 K St., NW, Washington, DC 20006. It is a publication devoted to comprehensive coverage of world literature on the theory, design, fabrication and application of electronic devices circuits and systems. Sources include periodicals, government reports, conference proceedings, books, dissertations and patents. Extensive cross referencing and indexing by topic, subject, source and author make possible retrieval of information on thousands of topics in a comparatively short space of time. Vol. 1, No. 4 contains some 4,677 abstracts in 440 pages (plus Table of Contents and Topic Index). Yearly subscription rate in the United States and Canada is \$130; elsewhere the subscription rate is \$140.

The **1969 Audio-Visual Equipment Directory** (15th ed.), published by National Audio-Visual Association, 3150 Spring St., Fairfax, VA 22030, has been revised and updated to include new illustrated sections covering TV cameras, magnetic tape duplicators and storage cabinets. The new *Directory* contains 458 pp. and lists some 1,100 items under 25 general categories of equipment. Each item includes a photograph, specifications and price. Among the categories featured in the *Directory* are current models of motion-picture, filmstrip, slide, opaque and overhead projection equipment; record players, audio and video-tape recorders and playbacks and learning laboratory equipment. Also listed are sources for hundreds of special accessories and devices, charts for projection lamps and screen sizes and manufacturers' trade names. The *Directory* is priced at \$7.00 (\$6.50 if payment accompanies order).

**Proceedings of the First and Second Symposia on the Scanning Electron Microscope** are available in separate hardbound volumes from IIT Research Institute, 10 W. 35 St., Chicago, IL 60616. *Proceedings of the first* (1968) symposium contains 14 technical papers in 185 pages. It is priced at \$10.00. *Proceedings of the second* (1969) symposium contains 51 papers in 525 pages. It is priced at \$15.00. Dr. Om Johari is Editor of both volumes. In addition to technical papers both volumes contain bibliographies of other published material in the field of scanning electron microscopy.

**Learning Resources** is a cross-indexed compilation of information about short courses, seminars, conferences, workshops and other educational activities intended for engineers, educators and administrators. It is issued three times a year by Engineers Joint Council, 345 E. 47 St., New York, NY 10017, at a yearly subscription rate of \$30 (United States and Canada; elsewhere, \$31). Single copies are priced at \$15. Vol. 1, No. 1 (Winter 1968-1969) lists 53 subjects. Courses, workshops, etc., in Motion Picture and Television are not included in the subject listing. Subjects include Acoustics, Aerospace, Data Processing, Educational Technology, Electronics, Mathematics and Optics. Listings of the various offerings are cross-indexed by Subject, Location and Date.

The **Statistical Abstract of the United States**, published yearly by the U.S. Bureau of the Census of the Department of Commerce since 1878, is available in the 90th (1969) edition from the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402, at a price of \$5.75. The 1969 edition contains 1052 pages and more than 1,300 tables and charts which are reviewed and evaluated each year. Of the tables included in the 1968 edition, 61 have been omitted because the information is duplicated in other tables or for which no recent data are available; 56 entirely new tables have been added. Statistics on the motion-picture and television industries are given in various tables throughout the book.

**Disposal of Photographic Processing Wastes** (Kodak Publication No. J-28) contains information on the need for water pollution controls and the effective handling of chemical wastes. Some 300 Kodak chemical products are listed together with their BOD<sub>5</sub> count. BOD (Biochemical Oxygen Demand) is the potential of a sample of effluent to absorb oxygen from the receiving body of water over a given period of time. The greater the BOD, the faster the dissolved oxygen will be removed from a stream, leaving little for aquatic life. Without dissolved oxygen, fish and other marine life will die. In a section on recommended practices for processing laboratories, the booklet suggests that processing wastes should receive secondary treatment from a municipal treatment plant since this is the most practical method for reducing BOD<sub>5</sub> of the effluent from a processing laboratory. The booklet is available from Eastman Kodak Co., Rochester, NY 14650 at a price of \$1.00.

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**The Sylvania Lighting Handbook** for Theatre, Television and Professional Photography (3d ed.) is available upon request from Sylvania Electric Products, Inc., 1100 Main St., Buffalo, NY 14209. The handbook contains information on tungsten-halogen lamps, including 10,000-W lamps, optical systems and testing methods. Methods of production lighting are discussed and a glossary of terms is included.

**Licensintorg**, the Soviet trading company that buys and sells patents, is offering licenses of Soviet inventions to American business firms who may wish to produce them in the United States. A newsletter listing some of these licenses is available upon request from Licensintorg, M-461, Moscow, USSR, or from its United States representative, Amtorg Trading Corp., 355 Lexington Ave., New York, NY 10017.

**Sprockets for tape and film** and other micro-machined parts for tape and chart controlled devices and automated systems are illustrated and described in a 24-page catalog (AB-61) available from LaVezzi Machine Works, 4635 West Lake St., Chicago, IL 60644. Among the devices presented in the catalog are Geneva star wheels, drivers, assemblies, intermittent movements and other devices for special purposes. The catalog includes diagrams, photographs, specifications and detailed descriptions.

**Photographic Instrumentation 1969**, a booklet available from Traid Corp., Photo Instrumentation Div., 777 Flower St., Glen-

dale, CA 91201, contains descriptions and illustrations of Traid products. Included are 16mm and 35mm cameras, projectors, the PVR projector viewer reader and the R-660 film viewer reader.

**Film movements**, including a series for 16mm, 35mm and 70mm film featuring pin-registered operation and interchangeability, are described in a data sheet available from Traid Corp., 777 Flower St., Glendale, CA 91201. Other items described include film drive motors and take-up motors and movements for wide film.

**Pre-wired power outlet boxes** are described and illustrated in a catalog available from Waber Electronics, Inc., 2000 N. Second St., Philadelphia, PA 19122. The 16-page catalog provides information on more than 400 models.

**Spectra photometers**, illumination meters and related photometric equipment are described and illustrated in a package of data sheets available from Photo Research Corp., 3000 N. Hollywood Way, Burbank, CA 91502. The equipments are described in detail and suggested applications are included.

A **closed-circuit color film chain** is described and illustrated in color in a 4-page brochure available from Bell & Howell, 7238 North Linder Ave., Skokie, IL 60078. The system includes two film projectors, a slide projector, transfer assembly and a color video camera that can be used as a

component in the film chain or as an independent unit.

**Camerascope**, a combination closed-circuit TV camera and a McArthur microscope is described and illustrated in Bulletin TD 95-163 available from Westinghouse Electric Corp., P.O. Box 868, Pittsburgh, PA 15230. Each component of the system can be used independently or they can be used together for televising microscopic images.

**The Fall 1969 Motion Picture TV and Theatre Directory** is available from Motion Picture Enterprises Publications, Inc., Tarrytown, NY 10591. It is priced at \$2.50. The *Directory* lists names and addresses and telephone numbers in a number of categories, including producers in the United States and abroad, laboratory services, stock shot libraries, unions and guilds and manufacturers of motion-picture and television equipments. The *Directory* is published semiannually.

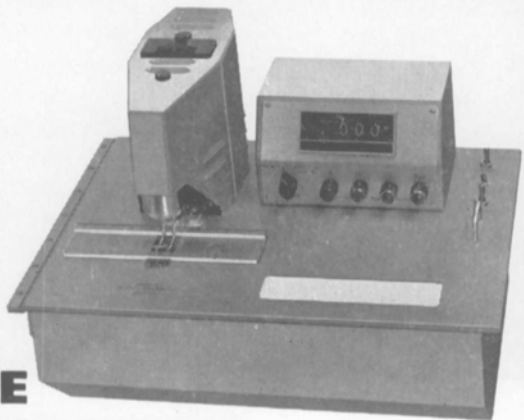
**The Audio Visual Source Directory, Fall-Winter 1969-70**, is available from Motion Picture Enterprises Publications, Inc., Tarrytown, NY 10591. It is published semiannually and priced at \$2.50. It contains names and addresses of manufacturers and suppliers of audio-visual equipments and materials throughout the United States. Included in the listings are sources of motion pictures and slidefilms available on a free loan basis. The *Directory* also includes a list of associations in the audio-visual field.

**Your Programs From Kodak** is a 16-page catalog, available from Audi-Visual Distribution, Eastman Kodak Company, Rochester, NY 14650, which describes movies, slide shows and print sets available to groups. Subject categories of available programs include travel and scenic, photography in education, sports and general interest.

A price list showing price revisions on **Eastman motion-picture films** is available from Eastman Kodak Co., 343 State St., Rochester, NY 14650. Price changes are in effect on 13 types of motion-picture film. The list revises prices given on pages 10, 12, 15, 16 and 20 of the *Price Schedule of Motion Picture Films for Professional Use*.

**The Photo-Sonics Model 16mm-1FA rotary prism camera** is described and illustrated in a 4-page data sheet available from Instrumentation Marketing Corp., 820 South Mariposa St., Burbank, CA 91506. The camera has an integral dc motor and frame rates of 200 to 1,000 frames/s. The data sheets contain specifications and drawings as well as photographs of the camera and related equipments.


**Photo-Sonics Model 16mm-1E rotary prism camera** is described and illustrated in a 4-page data sheet available from Instrumentation Marketing Corp., 820 South Mariposa St., Burbank, CA 91506. The camera has frame rates of 200 to 600 frames/s. The data sheet includes specifications and drawings together with descriptions and photographs of accessories and optional equipments.



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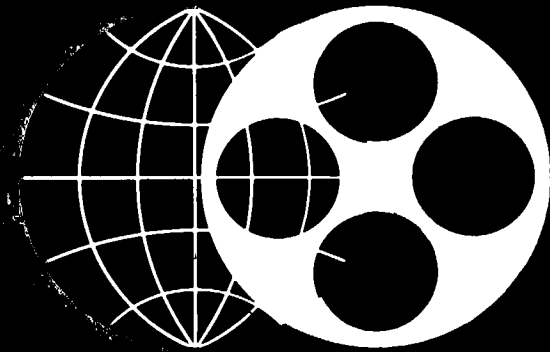
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The Westrex RA-1100-J is a direct reading densitometer that incorporates its own integral power supply, regulated to assure a constant, reliable light source. Its digital meter minimizes operator error and eliminates read-out ambiguities. Binary coded decimal (BCD) output is available for driving external equipment such as printers and recorders. Though it is designed for 35mm, the RA-1100-J can be used on any width film. Write for detailed information.



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The 1969-1970 Film Center catalog of films available for rental is available upon request from The Film Center, 915 12th St., N.W., Washington, DC 20005. More than 3,000 films are listed in the 240-page catalog.

Equipments for underwater photography are described and illustrated in a catalog available from Upsi (Underwater Photographic Scientific Inventions, Inc.), Box 26, Marathon, FL 33050. Included are such equipments for underwater use as flash guns for using flash cubes under water, lens adapters, a hooker rig and tropical slurrp guns.

The Passenger Entertainment System for the Boeing 747 aircraft is described and illustrated in color in a brochure available from Bell & Howell, Airline Products Div., 360 Sierra Madre Villa, Pasadena, CA 91109.

The Kalart Tele-Beam large screen TV projector is described and illustrated in a brochure (Bulletin #TB2C) available from The Kalart Company, Plainville, CT 06062. The projector receives closed-circuit inputs from TV cameras, video-tape recorders or off-air broadcasts. It projects an image up to 9 by 12 ft on a large screen.

The Kalart/Victor Model 82-25 MPR 16mm optical/magnetic sound projector is illustrated and described in Bulletin #2701 available from The Kalart Company, Hulthenius St., Plainville, CT 06062. The projector records sound on any magnetically

striped 16mm film and projects either magnetic sound or optical sound film.

Protection and Rejuvenation of Microfilm in Rolls and Aperture Cards by Lawrence L. Steele, a paper reprinted from the *Proceedings of the Thirteenth Annual Meeting and Convention of the National Microfilm Assn.*, is available upon request from Permafilm Inc., 79 Fifth Ave., New York, NY 10003. The paper describes tests conducted to determine a method of reducing scratches and abrasions and other damage to microfilm. The Permafilm treatment was found to reduce scratches and abrasions.

Cam Technology has issued the fifth in a series of bulletins planned for engineers responsible for designing or specifying cams. Bulletin #5 provides an analysis of parallel curves and cutoff in the generation of cam contours through the use of Electronic Data Processing-Continuous Path Numerical Control (EDP-CPNC). The bulletin contains a diagram and discusses parallel curves and cutoff in detail. Bulletin #5 is available upon request from Cam Technology, Inc., 10 Havens St., Elmsford, NY 10523.

The KEM Film Equipment System, which provides a wide range of apparatus for picture reproduction, sound reproduction, sound recording, transfer and mixing, is illustrated and described in a brochure available from Intercraft Corp., 354 W. 45 St., New York, NY 10036, importers of KEM equipment. The system is designed for flexibility and for various combinations to meet individual requirements.

The Professional Motion Picture Equipment Catalog (72 pp.) is available from Alan Gordon Enterprises Inc., 5362 North Cahuenga Blvd., North Hollywood, CA 91601. The catalog is arranged and indexed for easy reference and contains sections on such items as 35mm and 16mm cameras, lighting, editing and sound equipment, projectors, tripods and accessories. The catalog contains numerous illustrations and some 2,000 items are listed. Also included are lens charts and a detailed description and illustrations of the Dynalens gyrostabilizing lens system. Prices are given for all items described.

A catalog of analog and digital instruments is available from Greibach Instruments, Division of Solitron Devices, Inc., 37-11, 47th Ave., Long Island City, NY 11101. Such instruments as galvanometers, microammeters, wattmeters and digital multimeters are listed. The listings include photographs of the instruments and descriptions include specs and other data.

The VP3 Color Television Camera is described and illustrated in an 8-page brochure available from Visual Electronics Corp., 356 W. 40 St., New York, NY 10018. The brochure explains the operation of the camera and describes basic features of the camera components. The camera weighs 90 lb and features studio-quality color. The camera is also suitable for field use.

A 16mm optical sound projector featuring the Marc 300, high-intensity light source and power pack combination is illustrated and described in Bulletin #2702 available from The Kalart Company, Inc., Hulthenius St., Plainville, CT 06062. The projector is designed for use in auditoriums, large rooms or areas where high ambient light is present.

The "self-starting" xenon arc lamp (Data Sheet No. 206) and mercury capillary lamps (Data Sheet No. 301-1) are described and illustrated in data sheets available from PEK, Inc., Division of Varo, Inc., 825 E. Evelyn Ave., Sunnyvale, CA 94086. The xenon lamps employ a "striker" electrode that eliminates the need for high-voltage ignition pulses to start the lamp. The mercury capillary lamps are available over a range of luminous outputs as high as 260,000 lm.

Light sources, electronic accessories and related products are illustrated and described in the 12-page Product Reference Guide available from PEK, Inc., 825 E. Evelyn Ave., Sunnyvale, CA 94086. Descriptions of mercury and xenon short arc lamps, flash-lamps, mercury capillary lamps, power supplies, pulse generators and lamp housings are included in the brochure.

Ektachrome commercial film processing with "same-day" service is described in a brochure available from WRS Motion Picture Laboratory, 210 Semple St., Pittsburgh, PA 15213. The brochure describes the ECO processing machine, specifically designed to handle 7255 Ektachrome Commercial, plus EF, EFB and MS film.

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Easily mounted on 35mm and 16mm carbon arc projectors, and most incandescent projectors. Illumination is eight times that obtained from incandescent sources for 16mm projectors, the maximum the film can withstand. Illumination equals that of low powered carbon arcs for 35mm projection.

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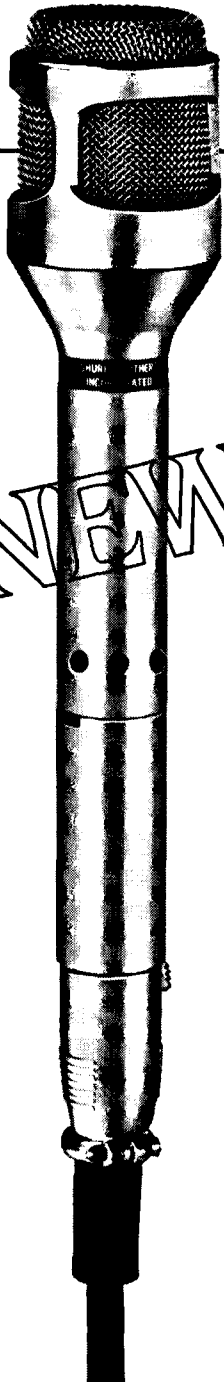
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**2. MORE EFFECTIVE REJECTION OF UNWANTED SOUNDS**

The SM53 prevents sound coloration due to off-axis reflections or reverberation—and, in addition, unwanted sounds (even air conditioner rumble) are effectively controlled. These properties are achieved through the polar pattern which is singularly uniform with frequency (even at the extreme low end) and is symmetrical about its axis.

**3. MECHANICAL NOISE ISOLATION**

Built-in effective shock mount significantly reduces the objectionable stand, cable, and handling noises associated with many unidirectional microphones. The SM53 can be used in many applications where conventional units have proved marginal or unusable.

**4. EXTRAORDINARY RUGGEDNESS**

You can even drop the SM53 directly on its nose without damaging the microphone element—and it will maintain its excellent performance characteristics.

**5. SUPERIOR HUM REJECTION**

Built-in hum-rejection system reduces magnetic hum susceptibility by as much as 20 db compared to other units! Makes it far more usable in distant pickup applications and in areas with extremely high magnetic fields.

**6. LESS SUSCEPTIBILITY TO "POP"**

Integral "pop" filter minimizes explosive breath noise without external screening. Works well where other microphones are marginal or unusable.

**7. MINIMIZED PROXIMITY EFFECT**

Uniform tonal quality is maintained (without objectionable low-end build-up) regardless of whether the microphone is worked close up or from a distance.

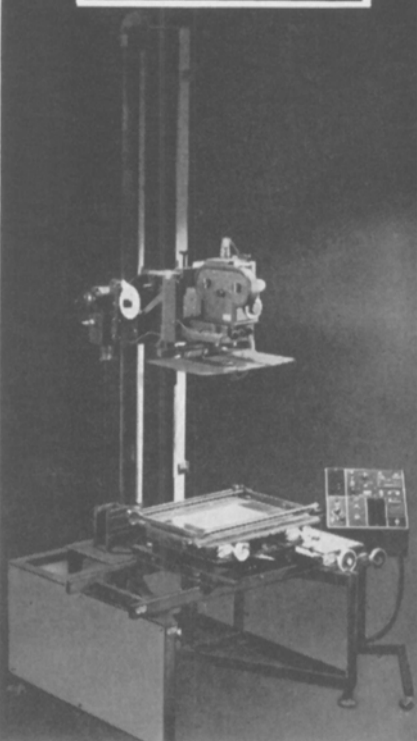
**8. FIELD SERVICEABILITY**

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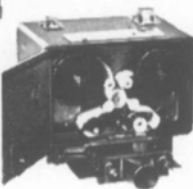
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**Arriflex 16mm and 35mm professional motion-picture cameras** are described and illustrated in a 40-page booklet available from Arriflex Corp. of America, Technical Information Dept., Box 1050, Woodside, NY 11377. The booklet contains illustrated "case studies" of various applications of Arriflex cameras with emphasis on unusual or difficult film assignments and the ingenuity of cinematographers.

**Sony Superscope tape recorders** are described and illustrated in color in a 48-page catalog available from Superscope Inc., 8150 Vineland Ave., Sun Valley, CA 91352. The catalog lists various types of tape recorders ranging from simple, comparatively inexpensive tape recorders to more sophisticated machines.

A **color and monochrome video-tape recording system (Model EV-320)** and a **special effects generator (Model SEG-1)** are described in data sheets available from Video Products Merchandising Department, Sony Corp. of America 47-47 Van Dam St., Long Island City, NY 11101. Model EV-320 features capstan-servo electronic editing. Model SEG-1 provides such effects as switching, fading superimposing or wiping two video signals.



## books reviewed

### Animated Film: Concepts, Methods, Uses

By Roy Madsen. Published (1969) by Interland Publishing, New York; Distributed by Pitman Publishing Corp., 6 East 43 St., New York, NY 10017. 234 + xiv pp. Illus. Diagrams. 10 by 8 in. Price \$14.75.

*Animated Film: Concepts, Methods, Uses* is a very interesting book. It is, essentially, what we could call a teaching book and, as such, it will certainly occupy an eminent place in the existing professional literature. It appears 10 years after publication of the classic *Technique of Film Animation* by Halas and Manvell and certainly invites comparison with that important book. Both books should be read together, and neither of the two should be missing in the serious animation artist's or technician's library.

Whereas Halas and Manvell give us, in the main, an extensive and detailed grounding with respect to the purely theoretical aspects of film animation, the great advantage of Dr. Madsen's excellent book is its practical value. Whereas the older book may give the reader a good understanding of the aesthetics, theory, and even mathematics of film animation,

Madsen's work will actually enable the attentive reader to learn, from scratch, how to make an animated film and to proceed to its practical completion. This is principally due to the excellently written chapters 2, 3, 4, and 5.

Chapter 2, "Concepts and Language" gives the necessary understanding of the film maker's terminology. Chapter 3, "The Animation Stand" gives a clear and fully comprehensible description of the animator's most fundamental tool. Such information, previously, could not be found anywhere. Chapter 4, "Pan and Zoom: Planning and Execution" and chapter 5, "The Filmograph" tell the reader, in easy understandable sentences, how to make good use of that complex instrument, the animation stand. This also is valuable information to which, previously, no easy access could be had.

These are some of the highlights of the book, but the rest is no less significant. There are very interestingly written chapters on the script, the storyboard, on style and on drawing animation, on the preparation of cels and their inking, on what paints to use (this is of very special importance), on backgrounds and on sound, and many other indispensable topics. As one keeps reading on and on, one gets the feeling that the author must be an outstanding and enthusiastic teacher, and enthusiasm is really what makes a teacher great. His planning of the book is comprehensive, his language is, in general, concise and to the point and his subject matter is well chosen and extensive, almost to the point of becoming encyclopedic.

It also appears that extensive research preceded the realization of the book, and that Dr. Madsen had, as he states, the "freely given cooperation" of a great many persons and institutions, as can be gathered from the impressive list of acknowledgments at the beginning of the text. From this one can infer the large amount of time invested in this work, the enormous correspondence necessary to carry it out, and the sympathetic response the author was able to awaken everywhere, factors all which conspicuously bespeak the author's capabilities.

The book's typographical layout and graphical design is artistically most attractive and in good taste. The many illustrations are, all of them, most useful and of outstanding quality. Page space has not been curtailed, thus favoring a broader approach to the author's exposition of fact and theory.

The author's almost encyclopedic approach, however, is what, in this reviewer's opinion, accounts for certain minor shortcomings of the book, shortcomings, we hasten to say, which in no way detract from the great usefulness of the book. Probably it is this all-encompassing approach which forces the author to mention only in passing certain facts with lesser importance for the general development of his plan. For this reason, perhaps, Lumière's participation in the development of the motion-picture camera is mentioned only too briefly. Not mentioned at all, for instance is the achievement of synthetic sound, produced through drawings of wave forms and their